# NOTE ON THE TERTIARY FOSSILS FROM HALL SOUND, NEW GUINEA.

By Professor Ralph Tate.

The collection of Tertiary fossils from Hall Sound, New Guinea, which was reported on by the late Rev. Tenison-Woods,* has been entrusted to my care by the Trustees of the Macleay Museum, through the intervention of Professor David, with the view to a critical comparison of the mollusca with those of the Older Tertiary of Southern Australia, to certain species of *Voluta* from which some approximate identifications had been essayed by the late Mr. Wilkinson.† My examination of the fossils dispels the notion of such a correlation; indeed, the genus *Voluta* is unrepresented in the collection, and it is not at all improbable that the cast of a species of *Strombus* may have been mistaken for that of *Voluta macroptera*. Nevertheless, Tenison-Woods expressed the opinion that the "deposits were a very recent Tertiary formation, much newer than any of the Murray River or Western Victorian beds," &c. I am not only able to confirm this opinion, but press for a more recent date than that implied by Tenison-Woods.

The collection embraces a very limited number of fossils with their tests preserved, the very large majority being casts or moulds in a very friable matrix. Of the species in the former category, the following have had names applied to them by the author above-quoted, viz.—*Pecten Novæ-Guineæ*, *Peronella decagonalis* and *Temnechinus Macleayi*.

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* P.L.S.N.S.W. Vol. ii. pp. 125 et 267 (1878); see also Jack and Etheridge, Geol. Queensland, pp. 690-698.

† Jack and Etheridge, *op. cit.*

PECTEN NOVÆ-GUINEÆ, Tenison-Woods.

The types of this species I have compared with authentic examples of *P. pallium* and I fail to find any distinguishing feature, not one amounting to individual variation. Tenison-Woods relied on the meagre development of the scales as a specific character for his new species. An examination of the two specimens on which the species was established reveals signs that they possessed scales on the ribs, which had evidently been worn down before fossilisation, whilst towards the front of all the ribs scales remain equal in strength to those of recent examples of the same size. There is no escape from the opinion that *P. Novæ-Guineæ* is simply a somewhat worn state of a typical *P. pallium.*

PERONELLA DECAGONALIS.

I accept Mr. Woods' identification of the fossil with the recent species of this name.

TEMNECHINUS MACLEAYI, Ten.-Woods.

This echinoid does not belong to this genus; it has some resemblance to *Paradoxechinus novus*, Laube, but in my judgment it has greater affinity with *Psammechinus Woodsi*, Laube, though I cannot attach it to that species. I am not sufficiently familiar with the recent species of that or related genera to venture a specific determination, particularly also in view of the imperfection of the unique specimen.

Of the rest of the fossils, which are casts, some approximate determinations are possible to the following species:—*Triton olearium*, Linn.; *Dolium costatum*, Lam.; *Strombus Campbelli*, Gray, or *S. vittatus*, Linn.; *Corbula crassa*, Hinds; *Arca granosa*, Linn.; *Lithodomus Cumingianus*, Reeve; *Orbitolites complanatus.*

One better acquainted with the living mollusca of Torres Straits than I am might approximately identify the large number of the casts and moulds with living species, so impressed am I with the absolutely modern facies of the fauna. The age of the deposit may, for the present, be accepted as Pleistocene.